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10/824,808	04/15/2004	Leslie Mark Ernest	AUS920040042US1	6687
45993 7590 09/25/2009 IBM CORPORATION (RHF) C/O ROBERT H. FRANTZ P. O. BOX 23324 OKLAHOMA CITY, OK 73123				
EXAMINER				
MILLER, ALAN S				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/824,808

**Applicant(s)**

ERNEST ET AL.

**Examiner**

ALAN MILLER

**Art Unit**

3624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14 and 40-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14 and 40-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)  
Paper No(s)/Mail Date 9/18/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This action is in response to the amendment filed 8/7/2009, requesting continued examination.

Claims 14 and 40-43 are pending and have been examined.

This action has been made Non-Final.

***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/7/2009 has been entered.

***Response to Amendment***

3. Amendments to the Claims:

Examiner notes amendments to claims 14, 40 and 41.

4. 35 U.S.C. § 112, sixth paragraph:

In respect to claim **41**, it is unclear whether the claim element is a means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph, because the claims recite the term “hardware means”, and the hardware means has a function, but does not recite the phrase “means for”. Currently, the claim elements are not being treated as a means plus function

limitation under 35 U.S.C. 112, sixth paragraph. If applicant wishes to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant is required to:

(a) Amend the claim to include the phrase “means for” or “step for” in accordance with these guidelines: the phrase “means for” or “step for” must be modified by functional language and the phrase must **not** be modified by sufficient structure, material, or acts for performing the claimed function; or

(b) Show that the claim limitation is written as a function to be performed and the claim does **not** recite sufficient structure, material, or acts for performing the claimed function which would preclude application of 35 U.S.C. 112, sixth paragraph. For more information, see MPEP § 2181.

5. 35 USC § 101:

Claim 41 recites the limitation “hardware means”; however, it is unclear what the “hardware means” actually are. For example, claim 41 recites the limitation “a grid computing control hardware means”, but a specific hardware means for grid computing control is not disclosed in the specification. For purposes of 35 USC § 101, Examiner will interpret hardware means to be a microprocessor, as disclosed by claim 42 and ¶0054, and therefore a statutory class. However, Examiner requests that Applicant point out in the specification what the hardware means are, and how the elements are not merely software implemented on a computer.

***Response to Arguments***

6. Applicant's arguments filed 8/7/2009 in regards to the Benjamin reference have been fully considered but they are not persuasive.

Applicant argues "The Benjamin reference is not directed towards service providers in a computing grid, but instead to "service providers" as "trading partners". Such "trading partners" are not computing resources in a computing grid, but instead are companies with whom a customer may want to "trade". Companies and computers are not the same, of course. Benjamin compares their automatically generated trading partner rating system to eBay's sellers' ratings, Moody's and Standard & Poor's debt ratings for companies (§§0003 - 0005).

For these reasons, we respectfully submit that since the technical operations related to executing computing jobs in a grid computing environment is unlike selecting a trading partner to perform a business job of a non-computing type, the Benjamin reference is not taken from analogous art and does not teach automatic rating generation of grid computing resources and computers." Examiner respectfully disagrees.

Examiner notes that while companies and computers are not the same, Applicant's invention is drawn to Rating Computing Grid Service Providers, and that the service providers, or vendors, that are being rated, are indeed companies (see Applicant's Figures, FIG. 2, 21, which discloses Grid Vendor : Grid ABC co. ; Grid XYZ co.; see also Applicant's PGPUB §§0048 - §§0052, or Applicant's Specification §§0040- §§0044). Further, the Benjamin reference discloses that "The invention may be applied to any marketplace in which suppliers provide services to buyers" (§§0008). The Applicant's invention and the Benjamin reference both compare and rank companies based on their ability to perform a job, and therefore is analogous art.

7. Applicant's further arguments with respect to claims **14, 40 and 41** have been considered but are moot in view of the new ground(s) of rejection. However, Examiner would like to address said arguments.

Applicant argued "reconsider that because our system receives electronic self-reports from OLTP grid computing resources in a grid computing environment, the data contained in those reports is significant and functional as it constitutes electronic information which is used to control other devices, namely selection and engaging of OLTP grid computing resources for subsequent execution. Thus, the report data and the processing of it form part of a control loop within a grid computing environment ('Job/Grid scheduler" #34 Figs. 4 & 6 "selects which server or servers., to assign to process the job" ¶0038; "grid computing control system" ¶0091). For these reasons, we strongly disagree with the conclusion that our invention would process the data the same way regardless of whether it was about OLTP or batch processing job results". Examiner respectfully disagrees.

Examiner cannot find a teaching the aforementioned paragraphs, nor anywhere in Applicant's specification, that discloses that the electronic information is used to control other devices, including OLTP resources.

¶0038 of the PGPUB, (which the Examiner believes the Applicant is referring too, since Applicant further references ¶0091, which is not a paragraph number that can be found in Applicant's originally filed Specification) states:

“ A Job/Grid Scheduler ("JGS") (34) retrieves each pending job from the inbound job-queue (33), verifies handling requirements against one or more SLA (305) to determine processing requirements for the job, and then selects which server or servers (28, 29, 300)

to assign to process the job (32). In this illustration, Server 2 (39) has been selected, so the job (32) is transferred to Server 2' job queue (36) to be processed when the server becomes available (immediately if adequate processing bandwidth is already available). Some servers may handle their job queues in an intelligent manner, allowing jobs to have priority designation which allows them to be processed quicker or sooner than earlier-received, lower priority jobs.”

It is unclear where in or how the self-reported data from OLTP grid computing resources is used to control other devices, from the above paragraph. Further, Examiner can not find any reference in this, or any other part of Applicant's Specification, which discloses OLTP grid computing resources.

¶0091 of the PG PUB states:

“The present invention enhances the ability of clients to request specific grid vendors who have historically performed according to a client's preferences, and enhances a grid computing control system's ability to select-grid resources and vendors for job assignment who have historically performed according to performance requirements.”

Again, it is unclear where in or how the self-reported data from OLTP grid computing resources is used to control other devices, from the above paragraph. Further, Examiner can not find any reference in this, or any other part of Applicant's Specification, which discloses OLTP grid computing resources.

The only mention of OLTP in Applicant's specification that Examiner can find is in ¶0053 - ¶0058 of the PG PUB, or ¶0044 of Applicant's originally filed specification, which states:

“[0053] Further, the **overall vendor rating** (27) is preferably determined either by an equal rating approach for all of the individual analysis results, or by applying a weighting scheme to the individual analysis results in order to prioritize certain performance characteristics as needed according to a client's requirements, or according to a grid performance objective. For example, a particular client may always prefer accuracy over cost and timeliness, and as such, the overall ratings for that client's table(s) may place greater weight on the accuracy individual analysis results when determining an overall rating for a vendor. In another example, a particular grid may be advertised or touted as a high-speed grid designed especially for time-critical jobs, and as such, the rating table(s) for that grid may place greater weight on the on time performance individual analysis results. [0054] Other analyses, table formats, and *fields within the table* may optionally include:

[0055] (a) an indication of the number of jobs upon which a particular score or ranking is based; [0056] (b) an indication of the age of the data upon which a particular score or ranking is based (e.g. current data, 30 day data, 60 day data, etc.); [0057] (c) a ranking of each vendor relative to the other vendors included in the table; and [0058] (d) **scores broken down by application or job type**, such as **Online Transaction Processing (“OLTP”), batch, database, and scientific types of applications.”**

The job type (OLTP, batch, database, etc) is merely a job type field for which a vendor score is related. No where in Applicant's specification can Examiner find any reference that “the data contained in those reports is significant and functional as it constitutes electronic information which is used to control other devices, namely selection and engaging of OLTP



grid computing resources for subsequent execution”. Therefore, the invention, as disclosed, would process the data the same way regardless of whether the data was about OLTP or batch processing job results, as disclosed by the Specification.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims **14 and 40** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims **14 and 40** recite the limitations “from one or more self-reporting Online Transaction Processing computing resources, corresponding to jobs completed by said self-reporting Online Transaction Processing computing resources”; “receiving by a grid computing control system one or more job results from a grid resource job results manager system corresponding to one or more jobs completed by said self-reporting Online Transaction Processing computing resources”; “analyzing by said grid computing control system said received job results and said received self-reports against client-driven Service Level Agreement performance requirements corresponding to said completed jobs”; “producing and updating a grid resource rating table having said sub-ratings rank-ordered according to a weighted analysis

of said sub-ratings for each resource vendor”; “selecting by said grid computing control system...according to said resource rating table, wherein said selection and assignment is performed according to historical performance against client- driven performance requirements per said grid resource rating table”; and “assigning an Online Transaction Processing job to said selected grid resource server”. However, Examiner is unable to find support for this new matter added in the current amendments in the originally presented specification. The new matter unable to be found includes:

*a grid computing control system,*  
*self-reporting Online Transaction Processing* computing resources,  
*jobs completed by said self-reporting Online Transaction Processing* computing resources,  
*analyzing by said computing control system* performance requirements *corresponding to said completed jobs,*  
*updating a grid resource rating table,*  
*selecting by said grid computing control system...according to said resource rating table,* wherein said selection and assignment is performed according to historical performance against client- driven performance requirements *per said grid resource rating table,* and  
*assigning an Online Transaction Processing job* to said selected grid resource server (emphasis added).

Examiner notes that the only reference to Online Transaction Processing that Examiner can find in Applicant’s originally filed Specification occurs in ¶0044, which discloses “Further, the **overall vendor rating** (27) is preferably determined either by an equal rating approach for

all of the individual analysis results, or by applying a weighting scheme to the individual analysis results in order to prioritize certain performance characteristics as needed according to a client's requirements, or according to a grid performance objective. For example, a particular client may always prefer accuracy over cost and timeliness, and as such, the overall ratings for that client's table(s) may place greater weight on the accuracy individual analysis results when determining an overall rating for a vendor. In another example, a particular grid may be advertised or touted as a high-speed grid designed especially for time-critical jobs, and as such, the rating table(s) for that grid may place greater weight on the on time performance individual analysis results. Other analyses, table formats, and *fields within the table* may optionally include: (a) an indication of the number of jobs upon which a particular score or ranking is based; (b) an indication of the age of the data upon which a particular score or ranking is based (e.g. current data, 30 day data, 60 day data, etc.); (c) a ranking of each vendor relative to the other vendors included in the table; and (d) **scores broken down by application or job type**, such as Online Transaction Processing ("OLTP"), batch, database, and scientific types of applications."

Claim 41 recites the limitations "a grid computing control hardware means". However, Examiner is unable to find support for this new matter added in the current amendments in the originally presented specification. The new matter unable to be found includes *a grid computing control system* (emphasis added).

Please point out by page/column/line number or paragraph number in Applicant's originally filed Specification where said limitations can be found.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims **14** and **40 – 43** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims **14** and **40** recite “self-reporting Online Transaction Processing computing resources”, however, turning to Applicant’s specification, Examiner can not find a definition or disclosure, either implicit or implied, of Online Transaction Processing computing resources. For purposes of examination, Examiner will interpret this as any system, hardware or software module that is available within a grid for use in completing a job.

Claim **41** is directed to a apparatus and method for using said apparatus. For example, claim 41 recites both a grid computing control hardware means and method steps the hardware means performs for performing a process automatically dynamically assigning a job. It has been held that a claim that purports to be within multiple statutory classes is ambiguous and is properly rejected under U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the invention (*IPXL Holdings LLC v. Amazon.com Inc.*, 77 USPQ2d 1140 (CA FC 2005); *Ex parte Lyell*, 17 USPQ2d 1548). Claims 42 and 43 are rejected as being dependent from claim 41.

#### ***Claim Rejections - 35 USC § 101***

12. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13. Claims **14** and **40** are rejected under 35 U.S.C. 101 because 101 based on Supreme Court precedent, and recent Federal Circuit decisions, the Office's guidance to examiners is that a § 101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. (*Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780,787-88 (1876).

To qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Here, in claim **14**, applicant's method steps, receiving, analyzing, and selecting and assigning, fail the first prong of the new Federal Circuit decision since they are not tied to another statutory class and can be preformed without the use of a particular apparatus. The claims recite a "grid computing control system", however, the Specification does not disclose that this is a machine or apparatus, and therefore can be software *per se*. There is only a nominal recitation of technology in the claims. Thus, claim **14** is non-statutory since it recites only a nominal use of technology and may be preformed within the human mind.

In regards to claim **40**, it appears Applicant is attempting to recite a Beauregard type claim, since the limitations after the preamble are method steps, however as written, it is not a proper Beauregard type claim. For a proper Beauregard type claim, the preamble should be written as, for example, "a computer storage medium, tangibly encoding software executable by a processor configured to perform the following steps".

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims **14 and 40-43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Al-Theneyan, Ahmed Hamdan, ("A Policy-Based Resource Brokering Environment for Computational Grids" (2002) Ph.D. dissertation, Old Dominion University, United States – Virginia; hereinafter Al-Theneyan) in view of Official Notice.

16. In respect to claims **14, 40 and 41**, Al-Theneyan discloses:

receiving by a grid computing control system one or more grid resource self-reports from one or more self-reporting Online Transaction Processing computing resources in a grid computing environment, ; (see at least page 12, which discloses a *Resource Monitor* that keeps track of the current status of the resources and updates the *Resource Repository*, page 49 which discloses The *Resource Monitor* keeps track of the current status of the resources. It updates the *Resource Repository* and the *Policy Enforcement Manager* frequently with up-to-date information about the resources. The *Resource Monitor* supports different approaches for monitoring the status of the resources. This includes the *Push Mode* approach where the daemon that resides on the resource sends (i.e. *self-reporting resource*) the required information (i.e. *self-reports*) to the *Resource Monitor* (i.e. *receiving by a grid computing control system one or more*

*grid resource self-reports from one or more self-reporting Online Transaction Processing computing resources in a grid computing environment*). Examiner notes that Examiner is interpreting *self-reporting Online Transaction Processing computing resources* as any system, hardware or software module that is available within a grid for use in completing a job. See also page 64, which discloses Resource Monitoring);

receiving by said grid computing control system one or more job results from a grid resource job results manager system corresponding to jobs completed by said self-reporting Online Transaction Processing computing resources;( see at least page 12, which discloses a *Resource Monitor* that keeps track of the current status of the resources and updates the *Resource Repository*, the *Resource Repository* maintains up-to-date information and historical performance information about all the available resources; see also page 65, which discloses the *Job Monitor* monitors the execution of the currently running jobs on the resources of the system (i.e. *receiving by said grid computing control system one or more job results from a grid resource job*));

analyzing by said grid computing control system said received job results and said received self-reports against client-driven Service Level Agreement performance requirements corresponding to said completed jobs (see at least page 66, which discloses SLA Monitoring Agent, which keeps monitoring the associated policies and takes appropriate actions in case of violations).

Al-Theneyan does not explicitly disclose determining one or more sub-ratings selected from at least one of (i.e. a group comprising of) percentage of jobs completed, percentage of jobs

completed within specified time constraints, an interactivensess rating, and a cost compliance rating.

Examiner notes that determining ratings of actual performance versus expected performance for attributes such as turnaround time (i.e. disclose *determining one or more sub-ratings selected from a group comprising percentage of jobs completed within specified time constraints*), was Old and Well Known at the time of the invention (see at least Benjamin et al. (U.S. Patent Publication 2002/0107723), Tables 1 – 7 and ¶0050).

It would have been obvious to one of ordinary skill in the art to include in the SLA Monitoring Agent and Resource Repository of AI-Theneyan, old and well known ratings of actual performance versus expected performance for attributes, since the claimed invention is merely a combination of old elements, and one of ordinary skill in the art would have recognized that it would produce a predictable result of having historical performance statistics stored in the Resource Repository for later use by the Policy Enforcement Manger to the appropriate resource(s) that can match the client's request.

AI-Theneyan further discloses a Resource Repository, wherein the Resource Repository maintains up-to-date information and historical performance information about all the available resources (see at least page 12; see also pages 48 – 49, which discloses the *Resource Repository* maintains up-to-date information about all the available resources in the system. To support prediction, the *Resource Repository* keeps some historical performance information about the resources. For the sake of scalability and high availability, we can have distributed *Resource Repositories* with each having its own set of resources);



AI-Theneyan also does not explicitly disclose producing and updating a grid resource rating table having said sub-ratings rank-ordered according to a weighted analysis of said sub-ratings for each resource vendor.

Examiner notes that a table of vendors ranked according to certain criteria was Old and Well Known at the time of the invention (see at least Shoquist et al. (U.S. Patent 5,361,199), column 6, lines 50-59, FIG.10).

It would have been obvious to one of ordinary skill in the art to include in the SLA Monitoring Agent and Resource Repository of AI-Theneyan, old and well known ratings in a table for each resource vendor ,since the claimed invention is merely a combination of old elements, and one of ordinary skill in the art would have recognized that it would produce a predictable result of having historical performance statistics stored in the Resource Repository in a table format, and by vendor, for later use by the Policy Enforcement Manger to the appropriate resource(s) that can match the client's request.

AI-Theneyan further discloses selecting by said grid computing control system an available grid resource server in said grid computing environment from a plurality of available grid resource servers according to said grid resource rating table; and assigning an Online Transaction Processing job to said selected grid resource server wherein said selection and assignment is performed according to historical performance against client- driven performance requirements per said grid resource rating table. (see at least pages 7 and 8, which discloses *Resource Allocation*, which is responsible for allocating resources to various tasks of an application...Broker Controlled Allocation is when the resource brokering environment decides for the client based on some client specified constraints, and further discloses based on some

historical performance information, the resource brokering environment should be able to predict the performance each resource is going to deliver at the time of the allocation (i.e. *wherein said selection and assignment is performed according to historical performance against client- driven performance requirements*); see also pages 12 - 13, that discloses the *Resource Broker* is the component that allocates resources based on client's requirements, and further discloses that the *Resource Broker* consults with the *Policy Enforcement Manager*, which then tries to find the appropriate matched resource(s) and returns the set to the Resource Broker (i.e. *selecting by said grid computing control system an available grid resource server in said grid computing environment from a plurality of available grid resource servers according to said grid resource; and assigning an Online Transaction Processing job to said selected grid resource server*); see also page 62, which discloses PROBE employs a policy based approach for resource brokering that attempts not only to match the user's request with the right set of resources, but also ensure the guaranteed level of the allocation. When requested, the *Policy Enforcement Manager* finds the appropriate resource(s) that can match the client request and gives them to the *Resource Broker*; see also pages 171 - page 172, which discloses Predictor, which predicts the future performance of resources based on historical performance information that is provided by the Resource Repository. When the Policy Enforcement Manager tries to find the appropriate resource(s) that can match the client's request, it would rely on the summarized data being generated by the Predictor so that it can match the best resource(s). Prediction is going to help in minimizing SLA violations and thus reduce the resulting penalties a resource provider has to pay in case of violations. Therefore, Al-Theneyan discloses selecting by said grid computing control system an available grid resource server in said grid computing environment from a plurality of

available grid resource servers according to said grid resource; and assigning an Online Transaction Processing job to said selected grid resource server wherein said selection and assignment is performed according to historical performance against client- driven performance requirements. Examiner again notes that for purposes of Examination, Examiner is interpreting *self-reporting Online Transaction Processing computing resources* as any system, hardware or software module that is available within a grid for use in completing a job).

In further respect to claim 41, Al-Thenyan discloses a 733 MHz PIII PC (page 137), (i.e. hardware means).

In respect to claim 42, Al-Thenyan discloses said hardware means comprises a microprocessor (see page 137, which discloses a 733 MHz PIII PC).

In respect to claim 43, Al-Thenyan discloses said hardware means comprises an integrated circuit (see page 137, which discloses a 733 MHz PIII PC).

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Benjamin et al. (U.S. Pub. 2002/0107723) discloses determining ratings of actual performance versus expected performance for attributes such as turnaround time.
- b. Shoquist et al. (U.S. Patent 5,361,199) discloses a table of vendors ranked according to certain criteria.

- c. Leff, Avraham, Rayfield, James T., Dias, Daniel M. "Service-Level Agreements and Commercial Grids." IEEE Internet Computing (July-August 2003): Pages 44-50. Discloses monitoring and enforcing SLAs (Page 48-49).
- d. Bartz et al., (U.S. 6,701,342) discloses Method and apparatus for processing quality of service measurement data to assess a degree of compliance with service level agreements.
- e. Aycock et al. (U.S. Patent 5,765,138) discloses interactive evaluation of potential vendors.
- f. Lidow (U.S. Patent Pub. 2002/0019761) discloses supply chain architecture and forecasts compared to contractual agreements.
- g. Spencer (U.S. Patent 6,356,909) discloses automated responses to and evaluations of request for proposals.
- h. Elnozahy et al. (U.S. Patent Pub. 2002/0077836) discloses verification of service level agreements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN MILLER whose telephone number is (571)270-5288.

The examiner can normally be reached on Mon - Fri, 10:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BRADLEY BAYAT can be reached on (571) 272-6704. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. M./  
Examiner, Art Unit 3624

/Bradley B Bayat/  
Supervisory Patent Examiner, Art Unit 3624